Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE CROCKER ECLIPSE EXPEDITION TO SUMATRA.

The total solar eclipse of May 17, 1901, is one of the most important astronomical events of recent times, on account of its long duration. The path of totality crosses the islands of Mauritius, Sumatra, Borneo, Celebes, Ceram, New Guinea, etc. Its duration reaches a maximum of six and one-half minutes on the west coast of Sumatra. This is, I believe, the longest duration for any *observable* eclipse in the last half-century, since serious eclipse-work began; though eclipses of slightly longer duration have occurred on the ocean. It is a fortunate circumstance that on the west coast of Sumatra the eclipse occurs near noon, (at twenty-two minutes after local mean noon,) with the Sun only 21° from the zenith. While the weather conditions along the line are not of the best, yet they appear to be as promising in western Sumatra as in any of the islands farther east. This is likewise the region most accessible for observing-parties.

The Lick Observatory has had it in mind to prepare extensively for the suitable observation of this important eclipse. However, the reduced size of our observing-staff, and the pressure of work on the *Eros* campaign, made it impossible to plan for the expedition, until the middle of January.

It is a pleasure to announce that the Lick Observatory is again indebted to the generosity of WILLIAM H. CROCKER, Esq., who has offered, by virtue of his interest in the work, to defray all the expenses of an expedition to Sumatra.

The expedition plans to leave San Francisco on February 19th, traveling via Yokohama, Hong Kong, and Singapore. It should reach Padang, Sumatra, about April 10th. Assistant Astronomer C. D. PERRINE will be in charge, accompanied by one assistant from here. He will plan to secure the services of ten or twelve local assistants, during the week of the eclipse, from among the foreigners in Padang.

The long duration makes this the occasion for investigations on the corona, rather than on the edge of the Sun. It also affords unusual advantages for a search for unknown objects in the Sun's vicinity,—such as the planet, or planets, *Vulcan*. Accordingly, the work will be largely limited to these lines. I regret that we shall not be able to spare from the Observatory a spectroscopic observer; but I shall send one or two simple spectrographs along with the party, suitable for recording the coronal spectrum, hoping that the pressure of other work will not prevent their use.

W. W. CAMPBELL.

A LIST OF EIGHT NEW SPECTROSCOPIC BINARIES.

The following eight spectroscopic binaries, discovered with the Mills spectrograph, are additional to the seventeen already announced in these *Publications* :—

12 Persei ($\alpha = 2^{h}\ 36^{m}$; $\delta = +39^{\circ}\ 46'$).

The binary character of this star was discovered in January, from the second spectrogram. The spectra of both components are visible on the first three plates, and are not very unlike. On the last plate the two spectra appear to be coincident.

Date.	Velocities.
1899 Dec. 19	-42^{km} and $\pm\ 0^{km}$
1900 Jan. 22	-3 “ -54
Jan. 26	-11 “ -43
Aug. 7	-27

The velocity of the system is about -25 km per second.

ξ Ursæ majoris ($\alpha = 11^{h}\ 13^{m}$; $\delta = +32^{\circ}\ 06'$).

The principal component of this well-known double star has a variable velocity in the line of sight. *ξ Ursæ majoris* is therefore a triple system. The visible system is interesting historically, as having been the first one to show orbital motion, the two visible components forming a close and rapidly revolving system ($a = 2''.5$, $P = 60$ years). It has been observed with the micrometer very frequently since the beginning of the century, but no evidences of perturbative influences have been revealed by the measurements.

Date.	Velocity.
1897 Feb. 23	-8.4^{km}
April 8	-15
1899 Feb. 22	-11.5
April 5	-14.1
1900 Feb. 26	-21.9
Mar. 9	-18.4
Mar. 12	-19
Mar. 14	-21.6
Mar. 20	-20
May 8	-18

The variable velocity was discovered early in March, from the fifth plate.